

1
00:00:01,899 --> 00:00:06,380
[Music]

2
00:00:06,440 --> 00:00:15,179
your guide to constellations deep-sky

3
00:00:09,679 --> 00:00:18,539
objects planets and events tonight's sky

4
00:00:15,179 --> 00:00:42,270
highlights of the June sky

5
00:00:18,539 --> 00:00:42,269
[Music]

6
00:00:44,039 --> 00:00:49,839
brilliant Venus dominates the western

7
00:00:47,079 --> 00:00:57,609
sky at dusk joined by the crescent moon

8
00:00:49,840 --> 00:01:00,130
during the middle of the month with a

9
00:00:57,609 --> 00:01:03,909
backyard telescope Venus looks like a

10
00:01:00,130 --> 00:01:06,430
miniature moon it is clear that we see

11
00:01:03,909 --> 00:01:08,729
only part of the sunlit side of the

12
00:01:06,430 --> 00:01:08,730
planet

13
00:01:12,540 --> 00:01:16,849
[Music]

14
00:01:20,728 --> 00:01:25,840
Jupiter dominates the southern sky

15
00:01:23,349 --> 00:01:34,389
shining in the dim constellation of

16
00:01:25,840 --> 00:01:36,879
Libra the scales a backyard telescope

17
00:01:34,390 --> 00:01:52,179
readily reveals its cloud bands and

18
00:01:36,879 --> 00:01:55,868
orbiting moons Saturn Rises later in the

19
00:01:52,179 --> 00:02:01,509
evening and on June 27th it comes into

20
00:01:55,868 --> 00:02:04,780
opposition on this night

21
00:02:01,509 --> 00:02:07,719
Saturn lies opposite the Sun in the sky

22
00:02:04,780 --> 00:02:10,509
at its brightest rising with the full

23
00:02:07,719 --> 00:02:15,759
moon at sunset and visible throughout

24
00:02:10,508 --> 00:02:18,399
the night during opposition saturn is

25
00:02:15,759 --> 00:02:25,780
closer to Earth than at any other time

26
00:02:18,400 --> 00:02:29,290
of year appearing at its largest for the

27
00:02:25,780 --> 00:02:32,919
year its rings and perhaps a faint cloud

28
00:02:29,289 --> 00:02:33,989
band or two may be visible with a modest

29

00:02:32,919 --> 00:02:47,739
telescope

30
00:02:33,990 --> 00:02:47,740
[Music]

31
00:02:48,340 --> 00:02:54,360
turn your gaze upward

32
00:02:50,658 --> 00:02:57,759
to find four distinctive constellations

33
00:02:54,360 --> 00:03:03,790
[Music]

34
00:02:57,759 --> 00:03:03,789
high overhead lies Bootes the herdsman

35
00:03:03,848 --> 00:03:09,138
find it by looking for its prominent

36
00:03:06,530 --> 00:03:12,370
kite shape which was noted by many

37
00:03:09,139 --> 00:03:12,370
ancient cultures

38
00:03:17,909 --> 00:03:26,530
Arcturus is the fourth brightest star in

39
00:03:20,800 --> 00:03:32,530
the night sky the star epsilon bootes is

40
00:03:26,530 --> 00:03:35,560
also known as eyes are in binoculars

41
00:03:32,530 --> 00:03:40,090
eyes are resolved into one of the finest

42
00:03:35,560 --> 00:03:45,030
double stars in the sky the color

43
00:03:40,090 --> 00:03:45,030

contrast between the stars is striking

44

00:03:49,629 --> 00:04:00,709

[Music]

45

00:04:03,389 --> 00:04:13,259

just to the left of Bootes lies the

46

00:04:06,539 --> 00:04:16,139

northern crown Corona borealis this

47

00:04:13,259 --> 00:04:19,319

lovely circlet of stars represents the

48

00:04:16,139 --> 00:04:23,909

wedding crown of Ariadne the daughter of

49

00:04:19,319 --> 00:04:26,730

king - of Crete while the stars are not

50

00:04:23,910 --> 00:04:27,500

very bright their pattern is easy to

51

00:04:26,730 --> 00:04:47,000

pick out

52

00:04:27,500 --> 00:04:47,000

[Music]

53

00:04:49,000 --> 00:04:55,269

the mythical strongman Hercules is also

54

00:04:52,939 --> 00:05:01,009

found high in the summer night sky

55

00:04:55,269 --> 00:05:04,939

wielding his mighty weapons the

56

00:05:01,009 --> 00:05:07,459

constellation is rather dim look for

57

00:05:04,939 --> 00:05:11,569

it's lopsided square of four stars

58
00:05:07,459 --> 00:05:14,870
called the Keystone the Keystone in

59
00:05:11,569 --> 00:05:17,449
Hercules is the key to finding one of

60
00:05:14,870 --> 00:05:20,810
the brightest globular star clusters in

61
00:05:17,449 --> 00:05:24,610
the summer night sky the wonderful

62
00:05:20,810 --> 00:05:29,509
Hercules cluster also known as m13

63
00:05:24,610 --> 00:05:32,538
contains about a million stars outside

64
00:05:29,509 --> 00:05:37,579
the Keystone lies another magnificent

65
00:05:32,538 --> 00:05:40,069
globular cluster of stars m92 gob Euler

66
00:05:37,579 --> 00:05:43,269
clusters are collections of closely

67
00:05:40,069 --> 00:06:05,949
packed gravitationally bound stars

68
00:05:43,269 --> 00:06:09,709
[Music]

69
00:06:05,949 --> 00:06:13,459
Draco the dragon winds his way through

70
00:06:09,709 --> 00:06:16,849
the northern sky the dragon's head is a

71
00:06:13,459 --> 00:06:19,689
skewed square of stars look for the

72
00:06:16,850 --> 00:06:23,030
dimmiest of the corner stars in

73
00:06:19,689 --> 00:06:25,519
binoculars it resolves into two stars

74
00:06:23,029 --> 00:06:26,529
which look like a great pair of

75
00:06:25,519 --> 00:06:35,478
headlights

76
00:06:26,529 --> 00:06:35,478
[Music]

77
00:06:37,939 --> 00:06:42,240
[Music]

78
00:06:44,930 --> 00:06:51,418
Mars shining like a bright red coal in

79
00:06:48,660 --> 00:06:59,370
the constellation Capricornus rises

80
00:06:51,418 --> 00:07:02,609
around midnight as Mars approaches

81
00:06:59,370 --> 00:07:06,300
opposition next month and the distance

82
00:07:02,610 --> 00:07:10,379
between it and Earth shrinks its image

83
00:07:06,300 --> 00:07:16,050
grows larger it may be possible to see

84
00:07:10,379 --> 00:07:20,870
large-scale details on the surface the

85
00:07:16,050 --> 00:07:20,870
night sky is always a celestial showcase

86

00:07:22,459 --> 00:07:26,599
explore its wonders from your own

87
00:07:24,810 --> 00:07:37,910
backyard

88
00:07:26,600 --> 00:07:37,910
[Music]

89
00:07:44,430 --> 00:07:46,490
you